



Environmental Justice Pilot Project Pesticide Air Monitoring in a Rural Community

About DPR

The Department of Pesticide Regulation (DPR) protects human health and the environment by regulating pesticide sales and use and fostering reduced-risk pest management. DPR's strict oversight includes pesticide evaluation and registration, environmental monitoring, residue testing of fresh produce, and local use enforcement through the county agricultural commissioners.

Project Concept

As part of its Environmental Justice Action Plan (www.calepa.ca.gov/EnvJustice/ActionPlan), Cal/EPA is developing and conducting four pilot projects that incorporate some of the themes in the Governor's Environmental Action Plan and focus on environmental risk factors that impact children's health. DPR will lead a pilot project in the Central Valley, focusing on pesticides in a rural, farming community.

Because they are located closer to agricultural fields, California rural communities may have higher concentrations of pesticides in ambient air compared to urban communities. Air monitoring conducted by the Department of Pesticide Regulation (DPR) and the Air Resources Board currently provides limited data to estimate human exposure to both single and multiple pesticides over several months or years.

This pilot project will provide more systematic air monitoring for a community in the Central Valley and therefore will serve as a more robust foundation for exposure assessment. DPR conducted a similar project in Lompoc (Santa Barbara County) and the U.S. Environmental Protection Agency is conducting one in McFarland (Kern County). DPR will use similar methods for this study. For example, air sampling devices are typically placed on the roofs of public buildings (like schools), and analyses are done for a number of targeted pesticides. The study will likely include 20 to 30 pesticides. Monitoring will likely occur at two to four sites in a single, rural community, sampled 4 to 12 times per month, for 6 to 12 months.

DPR is soliciting comments on all aspects of this project, but initial comments should focus on three issues.

Issue 1: What should be the specific objectives of the air monitoring study?

The objectives will define the scope of the project. These objectives should be simple, measurable, attainable, realistic, and timely. The following are some examples:

- Are residents of the community exposed to pesticides in the air?
- Which pesticides are people exposed to and in what amounts?
- Do measured pesticide levels exceed levels of concern to human health?



Issue 2: How should DPR select the community to monitor?

For its monitoring projects, DPR typically selects communities where pesticide use is highest. Other factors, such as location and demographics, come into play as well. The following are some examples:

- Select a community where pesticide use is high in the immediate vicinity?
- Select a community with a high percentage of children?
- Select a community that has persistently low wind speed?

How should DPR measure and weight each of the criteria?

Issue 3: How should DPR select the pesticides to monitor?

Not all pesticides can be monitored due to sampling and laboratory constraints. The following are some examples of criteria for selecting the pesticides:

- Select pesticides with higher volatility relative to other pesticides?
- Select pesticides with higher use relative to other pesticides?
- Select pesticides with higher toxicity relative to other pesticides?
- Select pesticides that can be analyzed in the same sample as other pesticides?

<p>Comments are due by January 3, 2005</p>

Project Constraints

DPR has several limitations on the community and pesticides that can be monitored.

- Limitations on field sampling: Personnel are limited to one person/team based in Fresno, with additional support and backup personnel in Sacramento. The number and location of monitoring stations is limited to the ability for one person/team based in Fresno or Sacramento to sample in one work day.
- Limitations on laboratory analysis: Personnel are limited to one person based in Sacramento. Samples can likely be analyzed with one or two methods for 20 to 30 pesticides.

Additional Information

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